

Influences of Policies and Language of Communication on Achievement Level of Extension Services among Crop Farmers in North-eastern Nigeria

Abubakar Shehu Umar¹, Norsida Man^{2*}, Jasmin Arif Shah¹, Nitty Hirawaty Kamarulzaman²

¹Department of Agricultural Technology, Faculty of Agriculture,

Universiti Putra Malaysi, 43400 UPM Serdang, Selangor, Darul Ehsan, Malaysia,

²Department of Agribusiness and Bioresource Economics, Faculty of Agriculture,

Universiti Putra Malaysi, 43400 UPM Serdang, Selangor, Darul Ehsan, Malaysia

*Corresponding Author

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.801102>

Received: 26 December 2023; Accepted: 05 January 2024; Published: 08 February 2024

ABSTRACT

Extension services are intended to promote “agricultural development” by enhancing farmers’ technical expertise, farm management abilities, and an efficient information system. This will ultimately lead to increased production, higher returns on investment, and a long-term boost for the local, national, and international economies. Little or no success information was recoded in terms of extension policies and language of communication used by extension workers in Nigerian context. Effectiveness of these policies and language of communication used in the implementation of extension services for crop farmers was not much available. To achieve this, there is need to study the factors influencing the achievement of extension services among crop farmers. Correlation and regression model were used to achieve the cause-effect analysis among the policies and language of communication in influencing crop farmers on the achievement of extension services in North-eastern Nigeria. The findings revealed that the relationship between policies and language was positive and highly significant ($p < 0.05$) among the crop farmers on achievement of extension services. Language of communication recorded the strongest ($r = 0.739$) relationship. The cause-effect relationship between the variables further showed that policies and language of communication significantly ($p < 0.05$) affected achievement of extension services among crop farmers. The regression model was significant with an R-value of 0.755. In this respect, the current study concludes that language of communication of extension workers influences the achievement of extension services delivered to crop farmers in North-eastern Nigeria.

Keywords: Language of communication, Policies, Extension services

INTRODUCTION

Nigeria’s strategy to restructure the industry is showing signs of weakness, with the agricultural extension service being one of them (Morwani et al., 2017; FMARD, 2012; Diehl and Galindo-Gonzalez, 2014). Nigerian smallholder farmers have remained behind their peers due to their inability to increase production because of the country’s agriculture extension service delivery system collapsing. For decades, the country’s agricultural output has been hampered by farmers’ inability to acquire essential information and extension

agents' ineffective transmission of that information (Morwani et al., 2017). For effective functioning of the individuals and to meet agricultural organizational goals and development, extension agents who are the most valuable assets of an organization have complex peculiar needs, habits and behaviors that must be understood and managed (Morwani et al., 2017). Policies are a deliberate course of action to direct decisions and achieve reasonable results (Aldosari et al., 2017). Extension policies enable farmers to learn the latest expertise and to introduce the latest technology to increase the productivity of the agricultural sector. The government is therefore taking measures to increase farmers' confidence in the new technologies (Msuya et al., 2017; Liu et al., 2017). Agricultural extension policy issues are likely to have a major effect on the achievement of Nigeria's agricultural extension services. Msuya et al. (2017) showed that several variables are attributable to the inefficiency and negligible influence of Nigeria's agricultural extension strategy. These factors, for instance, include the lack of a legislative extension policy and inaccurate policy (Anaeto, 2017; Otishua et al., 2018).

Effective communication is viewed as a necessary tool for establishing and maintaining positive social and professional relationships that allow people to exert influence over their surroundings. (Anaeto, 2017). To transmit agricultural information to farmers, extension professionals require effective communication tactics. Agricultural advisory agents are committed to sharing research station findings with farmers and bringing research institutes farmers' problems. Effective communication between researchers, extension personnel, and farmers is essential to accomplish this. (Kuehne, 2017). Farmers should be able to get correct information from extension workers about the various technology options available and how to pick among them. They must be able to communicate effectively, solve problems, and listen attentively (Rahman and Yousif, 2016; Kuehne, 2017). The aim of this study is to determine the relationships between policies and language of communication on achievement of extension services. And to determine the factors influencing the achievement of extension services.

Research Hypothesis

The hypotheses were represented below:

H1: There is significance relationship between policies and achievement of extension services

H2: There is significance relationship between language of communication and achievement of extension services

H3: There is significance influence of policies on achievement of extension services

H4: There is significance influence of language of communication on achievement of extension services

LITERATURE REVIEW

Agricultural Extension Policies in Nigeria

Policy formulation is a crucial aspect of governance in any nation or organization as it provides guidelines and framework for the realization of their set goals. The focus of Nigeria's agricultural policy is on achieving self-sustaining growth in all sub-sectors of agriculture, as well as the structural transformations required for the country's overall socio-economic development and improvement in the quality of life of Nigerians. Wide-ranging policies that led to the creation of agricultural development organizations, programs, projects, agencies, and financial institutions were developed to attain the objective. These organizations include, among others, the National Agricultural Land Development Agency (NALDA), the Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB), the Nigeria Agricultural Insurance Corporation (NAIC), the Green Revolution (GR), Operation Feed the Nation (OFN), River Basin

Development Authorities, Department of Food Roads, and Rural Infrastructure (DFRRI), and the Department of Food. Apart from the above-mentioned establishment, there are quite a few other related Institutions, agencies and corporations which were established by state governments. These are offshoots of various policies with high expectations about their impact on the economic growth and well-being of Nigeria and Nigerians.

Relationship between Extension Policies and Achievement of Extension Services

Agricultural extension policy issues are likely to have a major effect on the achievement of Nigeria's agricultural extension services. According to a review study FMARD (2012), there are numerous reasons why Nigeria's agricultural extension policy is poor and has little impact. These factors, for instance, include the lack of a legislative extension strategy and inaccuracy of policy (FMARD, 2012), difficulties with finance and inadequate diversification, a low degree of private sector involvement in the provision of extension services, and ineffective synergy across the levels of government (FMARD, 2012).

Extension personnel's weak capacity and technical know-how and insufficient manpower for the effective provision of services (FMARD, 2012). Policymakers' initiatives and policies will not produce anticipated and successful results if there is no legislative support for an implementation process. A policy that is legislated efficiently and in a timely manner may influence scale, especially in developing countries. The report noted that one of the major challenges hindering agricultural extension growth and achievement in Nigeria is the lack of a properly legislated agricultural extension policy (FMARD, 2012). For instance, no formal legislation was guided by the 2001 Agricultural Extension Policy, which was the first NEP to be documented.

In addition, the report revealed that a variety of agencies and institutions across the country deliver agricultural extension services in Nigeria, and several of these organizations neglect core concepts and philosophies to direct the delivery of agricultural extension, leading to outputs that are below expectations. Nigeria also lacks a legal platform for the planning and monitoring of activities for agricultural extension in no small way has this contributed to the inefficient implementation of agricultural extension policies, particularly at the level of the state (FMARD, 2012).

Adequate funding is key to achieving the desired results in the delivery of agricultural extension services. In the context of agricultural extension policies, there are two major problems associated with funding: Inadequate funds and early or late disbursement of funds for agricultural extension policy implementation. FMARD has highlighted these issues as one of the key barriers to the introduction of agricultural extension policies (FMARD, 2012).

The ADPs, World Bank and the federal and state governments launched and jointly funded them, which are still in existence. The efficacy of the ADPs, however, decreased significantly soon after the World Bank withdrew its sponsorship. Nigeria's state ADPs were listed as having weak funding sources, while Davis et al. (2019) argued that there has been no funding change because there is little to no attempt at either the federal or state level to diversify the funding sources for agricultural extension services. Mbang (2015) showed that in some of the state agriculture sectors, the state government is the major source of funding.

The allocated funds, however, are not sufficient to implement agricultural programs and to effectively carry out extension services in the states in 2014, for example, just 1.6 percent of its proposed budget was allocated to the GSADP by the Gombe State Ministry of Agriculture and Natural Resources for the implementation of agricultural extension and advisory services (Gambo, 2015). Meaning the state may have a weak determination and political will to finance policy initiatives. Through offering agricultural extension services under the umbrella of the public sector, the private sector has a role to play in enforcing agricultural extension policies. However, the AETA report indicated that private sector involvement in the articulation

of agricultural extension policy remains very small (FMARD, 2012).

The privatization of extension service delivery in Nigeria has shown that it offers the potential for better administration and greater efficiency and effectiveness than the extension currently in place in the nation led by the public sector. Arokoyo (2009) indicated that the low investment of the private sector is due to the reduced confidence of investors because of the unfavorable policy climate, policy flip-flops and minimal or no incentives available in the agricultural extension sector. Limited private sector participation, even at the level of the formulation of agricultural extension policies, is therefore likely to have an impact on the implementation and effectiveness of the policies and related interventions under the policy framework.

Extension personnel must be trained in technical subject-matter fields through various value chains, the administration and execution of extension service delivery systems, human resource management and growth dynamics, project planning and evaluation, teamwork and process program development, teaching and information sharing skills, communication methods, and technology assessment (Tata and McNamara, 2018). These capabilities will ensure a high level of professional competence and improve the capacity of extension officers to perform their functions. However, there are several challenges in Nigeria that could hinder the successful implementation of state-level agricultural policies, most of which are related to the capacity, skills and performance of state ADP staff. Given their significant role in implementing agricultural extension policies at the level of the state and farmers, (Umeh et al., 2015). Additionally, several studies have shown that politics influence agricultural extension policies on involvement of farmers in extension services. Within their core areas of specialization, many agents are less inspired to pursue information about or familiarize themselves with trending problems.

Extension Policy Formulation and Achievement of Extension Services

Nigeria began using a more restricted strategy of import prohibitions, or bans, as part of its broader trade policy in the mid-1970s (Oyejide, 1975). Although intended as a temporary measure to protect native companies and reduce the country's perceived reliance on imports, the import restriction policy has persisted to the present, with twenty-four products on the prohibition list as of October 2012 (NCS 2012). Pork, cattle, frozen chicken, refined vegetable oils, bagged cement, corrugated paper, textiles, secondhand automobiles, and furnishings are among the items on the list. Nigeria's WTO membership provides it with a robust external trade policy supervision tool in theory. However, the WTO's position as an "agent of restriction" in favor of sound trade policy is only possible if two key requirements are met.

Firstly, the government whose actions are to be "restrained" must be dedicated to sound trade policy and, as a result, be willing to tie itself up in external treaty obligations to fortify its position against local interests. Then, the external agency needs to have enough sanctions at its disposal that it can deploy to punish improper trade policy behavior. These two things don't seem to have had any impact on Nigeria's decision to continue certain of its import prohibition policies.

According to the report, the head of the Lagos Chamber of Commerce and Industry noted that there are no concerns about the protective principles, but that there are concerns about the process; there was insufficient consultation prior to the current import prohibition policy. Import prohibition is a key trade policy problem that requires extensive debate, capability assessments, and the guidance of professionals in trade and economic growth before it is enacted. Local demand and capacity, changes in policy, and effects on already-existing treaties to which Nigeria is a signatory were not fully considered. Without first addressing these underlying challenges, any sustained effort to ease import restrictions in Nigeria is unlikely to be successful in the long run.

Agricultural Policy Implementation and Achievement of Extension Services

Any organization's or nation's policy instruments are just as vital as its vision, mission, and developmental

goals. However, due to non- or ineffective policy implementation, over 75% of the population in developing nations whose main source of income is agriculture remains impoverished and lives on less than \$1 per day. Hezell (1999) highlighted five variables that encourage agricultural growth: innovations, infrastructure, inputs, institutions, and incentives (five I's). This growth can only be achieved if policies are justifiably implemented. Some of the major challenges confronting the implementation of laudable policies are: 1) Governance inconsistency; 2) agriculture policy design and implementation inconsistency; 3) corruption; 4) politics and political instability 5) Nigeria's over reliance on oil at the price of agriculture 6) Ineffective initiatives for rural development; 7) Farmers with limited resources continue to dominate the agriculture industry ; 8) Diversion of agricultural and rural development funds; 9) Granting of agricultural loans to fake farmers who are mostly rich people that will not invest in agriculture; 10) Poor and insufficient incentives; 11) insufficient and inadequately equipped extension services; and 12) ineffective pricing and marketing structure grazing reserve, agricultural research institutions, agricultural bank. While the policy was focused on the introduction of crops, this major deficiency was rectified in 1989 with the implementation of the Unified Agricultural Extension of Services (UAES) which provided for inclusion in other sectors, viz: livestock, forestry, fisheries, natural resource management etc.

Village Extension Agent (VEA) is therefore required to provide extension messages to the farmers in all agricultural disciplines (sub-sectors). It has been told by the need for multiple agents to minimize the issues of contradictory communications to the customer. It was also expected that by eliminating duplication of efforts the system would become more cost-effective.

Language of Communication in Extension Services

A person can influence another person's conduct through communicating with them to impart impulses. The ability to build and maintain strong social and professional connections that enable people to have an impact on their environment are seen as outcomes of effective communication. Braimoh (2000). Extension personnel need to use effective communication strategies to deliver agricultural knowledge to farmers. The role of advisory staff is to convey findings from research-based institutions to beneficiaries and to communicate farmers' concerns to research organizations. To do this, there must be effective communication between researchers, extension agents, and farmers. Okayolo (2002). The act of conveying impulses to another individual to influence their conduct is known as communication (Lee, 1967). Effective communication is a key component in fostering and sustaining social and professional interactions that allow individuals to make an impact on their surrounds (Braimoh, 1998). To impart agricultural information to farmers, advisory experts must employ efficient communication methods. The advisory staff is dedicated to talking with research institutes and farmers about difficulties that arise at test stations. Successful communication between researchers, extension agents, and farmers is necessary to achieve the goals of extension services (Kahan, 2013).

Communication and Achievement of Extension Services

Rural communities and extension workers can communicate more easily thanks to the methods and tools used in extended education. They are strategies for educating rural populations about new information and abilities by capturing their interest, stimulating it, and assisting them in mastering the new task. Individual, group, and mass encounters are the three basic types of encounters. Individual interaction methods include personal letters, office visits, farm and home visits, and phone calls. Conferences, discussion groups, seminars, and field trips are examples of group approaches, while bulletins, pamphlets, circular letters, radio, television, exhibitions, fairs, and posters are examples of mass connections.

In Nigeria and other developing nations, radio has been frequently used to inform farmers about agricultural

difficulties. Radio is a great instrument for engaging with rural populations (Kahan, 2013). Field observations indicate that the desired results have not yet been attained, suggesting that extension agents' methods of informing farmers are unsuccessful. The reason for the inefficiency is a lack of understanding of farmer demands and the surroundings in which they work (Kahan, 2013). The absence of local substance non-agricultural extension initiatives is mostly to blame for the inefficiency. As agriculture evolves and intensifies, agricultural extension personnel must increase their knowledge and ability, according to Agbamu (2011). The bulk of village advisory agents, who are responsible for instructing farmers and disseminating agricultural extension messaging, have less formal education. Most extension agents in Nigeria have low levels of education, hence the quality of the extension support provided to farmers is still mediocre.

Another significant problem that has contributed to poor service performance and low people quality is the lack of pre-service training that employees received before starting work for the extension service. Agriculture extension personnel are trained at Nigerian universities, colleges, and polytechnics that lack the funding to produce agricultural graduates and teach ICT skills. Because of this, local extension agents lack sophisticated expertise in technical agricultural and communication techniques. As a result, the extension services provided to farmers are not significantly enhanced by this workforce's lack of qualifications, inexperience, or inadequate training (Ajayi, 2008). Institutions in Nigeria and other developing countries that train agriculturists must modernize their teaching farms and laboratories so that their graduates can raise the caliber of the agricultural message to farmers. As a result, local personnel will be more equipped to assist an extension organization in achieving its goals (Agbamu, 2011). Agriculture extension and communication staff play a critical role in assisting these farmers in gaining access to resources and markets.

Extension agents should be able to provide farmers with accurate information about the numerous technological options available and how to choose between them. They must possess the skills necessary for effective communication, problem-solving, and active listening. Employees of the Extension must be capable of leading and instructing their team as well as running the daily business of their office. The aim of communication is to get your point through to other people. Both the sender and the recipient are involved in this process. This approach is error-prone because communications are frequently misunderstood by one or more of the parties. This makes things more confusing and makes work less productive. A message is only effective when it is understood by both the sender and the recipient.

Field research indicates that the anticipated effects have not yet been attained, therefore extension agents' communication tactics to inform farmers frequently fail. Ineffectiveness may be to blame for the lack of knowledge regarding the requirements of farmers and the regional circumstances in which they operate (Okoro, 2004). Okoro states that insufficient local content accounts for much of the ineffectiveness of agricultural extension programmes. To make the agricultural sector of the economy appealing, both the federal and state governments must allow their programs to reach the public. And one way to make this happen is to make it easier for information about those programs to be properly distributed to nearby farmers in their native tongues. Numerous programs have been implemented by successive governments to develop the agricultural sector, but because of extension policy that has not considered indigenous language of communication for its implementation, the programmes have remained dormant and have had little impact on the sector.

The revitalization of the agricultural sector has been proclaimed by successive governments to be the highest priority. And to make this possible, it is important to reach the local farmers through their languages. In the language context of verbal and nonverbal interchange, contact is crucial for the quick development of agriculture in the nation. According to Omondi (1979), the use of gestures in delivering information to farmers is crucial. This will imply that the introduction of extra linguistic traits like gestures is possible even in the absence of mutual understanding between the extension agent and the farmer. According to Emenanjo

(1996), a sizable portion of the sub-professional staff should be people who are more accustomed to working with farmers and are familiar with their flora and fauna, as well as people who comprehend the customs and folklore of these farmers, like field instructors and extension workers who are willing to take on this task.

As a result, in this view, teachers and extension personnel have taken on a multifaceted role as educators, facilitators, motivators, and most importantly, communicators. This makes it essential that extension services be offered in all significant agricultural regions and that all informational approaches be carried out in the farmers' native tongues. Most of the programs that enlighten local farmers about the best ways to boost yield and other advancements are not broadcast in the language they understand because virtually all radio stations in Nigeria are run by the government. Nigeria is a multilingual nation that speaks more than 400 different languages production processes. For this, a question concerning the actual function of language arises considering this multi-ethnic mix.

The truth is that language has little bearing on whether the country's agricultural output grows. According to a study by Bamgbose (1991), states that are linguistically diverse tend to have less developed economies than states that are more homogeneous. The main issue raised by linguistic diversity is how to promote widespread and true agricultural development while also achieving mass participation and grassroots involvement. There is now little progress made in the field of mass communication, i.e., there is no flow of information, because communication experts in the nation believe that indigenous languages do not offer sufficient audiences to be studied. To spread information on fertilizers, pesticides, high-yielding crop types, optimum seasons for planting, irrigation and preservation, and other marketing outlets, most farmers in Nigeria are still only accessible through local languages.

Lack of understanding of farmers' needs and the environment in which they operate can be a major cause of inefficiency (Okoro, 2004). Okoro reports that insufficient local content accounts for much of the inefficiency in agricultural extension programmes. Effective agricultural extension can only be accomplished if the extension agent can speak the local language of the farmers Agbamu (2011). Using the language of communication for farmers raises awareness among farmers about the adoption of agricultural technologies. Agbamu (2006) took the view that communication was the first and indispensable step in the process of adoption. Adefuye and Adedoyin (2003) proposed that farmers should know and act in accordance with agricultural knowledge to achieve a steady flow of precise, understandable, and real agricultural growth. Therefore, the degree to which individuals succeed in whatever they do in agriculture primarily depends on the availability and access to correct and effective communication. Today, the dissemination of information is becoming much easier and more complex in the age of information technology. This is because it is necessary to disseminate data messages to farmers in appropriate ways and methods and to best support their recipients (Cartmell et al., 2004).

For agricultural extension services to function well they must be incorporated with the needs of the farmers. There is also a need to consider farmers' background, perceptions, and aspirations toward the achievement of extension services (Mokotjo & Kalusopa, 2010). Most projects incorporate technologies, and so communicators need to be mindful of evolving attitudes. Therefore, it is necessary to accept and apply the legislation. The law was created by a relatively small number of people, yet it will benefit thousands. Many country residents won't even be aware that the legislature has discussed and passed new legislation. Local land office representatives should be educated on the idea of property, rights and registration processes, costs and advantages, risks of not registering, etc. before they go out and talk about this new law. For those who may have been illiterate or may have only received a very limited education, they are all difficult ideas to grasp. The new law impacts society, but its execution would only benefit the people who register their property rights, making it a private good (Ballantyne, 2002).

Comparatively speaking, innovation is the discovery of something shared by individuals in one region but

unknown to those in another. It is unrelated to education or culture; physicists with PhDs might not be aware of how to produce bunnies. A highly trained Italian chef might not be familiar with how to prepare dishes using tropical ingredients. Scientists create new farming techniques, trained personnel test them, and extension agents share them with farmers after weighing their benefits and drawbacks. If the farmers continue to employ the techniques, they must evaluate their viability from a technological and economic standpoint before deciding whether to adopt them. Since many agricultural innovations are proprietary goods, farmers who use them earn from them. A better road is a sought-after good since it benefits the entire city. (Ballantyne) contends that it is important to inform the general population about what is happening and the significance of the extension services.

Advances of Communication in Extension Services

Most innovations in the past, especially in agricultural projects, were developed at public or private research institutions and provided to farmers through conventional top-down agricultural extension programs. This approach is also common in the commercial sector, where manufacturers of equipment, chemicals, fertilizers, and other inputs sell their goods through a variety of contact activities. The same top-down approach is somewhat used for other commodities where contract farming has a significant impact; the purchaser of the commodity forces a specific production strategy on the farmers, who are trained by advisors and constantly observed (Kone, 2002). At least at certain public research institutes, an increasing number of experts have come to doubt this approach in recent years. Additionally, there has been an increased focus on closer cooperation between scientists, extension agents, and farmers, which has altered the nature of necessary communication. The importance of farm-to-farm connections in the spread of agricultural advances has been highlighted in another research. In many regions of the world, especially in low-input agriculture like organic agriculture, these so-called endogenous inventions undoubtedly play a significant role.

REVIEW OF RELATED THEORIES

The study was based on three (3) theories which include Achievement Motivation Theory (AMT) by McClelland (1961), Policy theory by Charles and Eloise (1999) to Measure Policies, as well as Classical Communication Model by Nitsch 1999.

Achievement Motivation Theory (AMT)

The Achievement Motivation Theory relates personal and historical attributes to the desire for achievement and the associated competitive motivation to meet performance expectations. Achievement Motivation Theory (AMT) explains the integral relationship between the physical activities and the need for something to be achieved in life, doing so it also considers a person's sort of competitive drive to achieve set goals McClelland (1961). According to ATM, the need for a person to achieve something, and the reason behind his/her social activities to achieve a certain goal, according to the AMT, often, comes from within and is strongly related to the power and affiliation needs of individuals. Considering the nature of the theory it will easily be used to determine the achievement level of extension services. It has been reported by Kirikkanat (2014).

Policy Theory

According to Charles and Eloise's Policy Theory from 1990, public policy is made up of political decisions to put policies into place that are meant to further social goals. This indicates that elements of policy theory are political, and that choice, implementation, and system depend on one another to accomplish social goals. As the study also examines the connection between policy and the provision of agricultural extension services, this theory is relevant to the study. The theory guides how policy in politics, policy in decision

making and policy in implementation influence the achievement of extension services.

Classical Communication Model by Nitsch 1999

Classical Communication Model by Nitsch (1999) clarify that the transmitter is sent to its destination in every contact message. Various media like radio, television, newspaper, magazine, leaflet, posters, training course, lecture, conference, discussion etc. are used by the sender to communicate with the audience.

METHODOLOGY

The study was conducted in North-East Nigeria and used a structured questionnaire that was given to respondents who are registered crop farmers. The study area included six states: Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe state, the population of the study comprised of 3300 registered crop farmers in North-eastern Nigeria. Out of the population, the sample size of the 356 registered crop farmers was selected as a sample for this study. The sample size was determined using Yaro Yamani formula for determining finite population. Yaro Yamani Formula for finite population (Table 1).

$$n = \frac{N}{1+N(e)^2}$$

N = Finite Population (3300)

e = Level of Significance (0.5)

1 = Unity or Constant

$$\therefore \frac{3300}{1+3300(0.05)^2} = \frac{3300}{9.25} = 356 \text{ Samples}$$

Table 1: Population and Sample Size of the Respondents

North-eastern States	Population of Registered Farmer	Samples
Adamawa State	601	63
Bauchi State	555	61
Borno State	490	49
Gombe State	549	61
Taraba State	560	61
Yobe State	545	61
Total	3300	356

Source: Federal Ministry of Agriculture Gombe State

Primary data were gathered through questionnaires, with an emphasis on in-depth interviews with extension workers as part of the data collection process. A questionnaire was used to conduct a pilot survey with 30 respondents to evaluate the survey instrument's validity and reliability. The most appropriate and effective method to identify the factors impacting the level of achievement of extension services among crop farmers in the research area was to use correlation and regression analysis to evaluate the obtained data. A statistical method for assessing the strength of the relationship between the variables is correlation analysis. Increased correlation indicates a strong relationship between two or more variables, whereas a low correlation indicates a tenuous connection. SPSS version 21 was used for all the analyses.

RESULTS AND DISCUSSION

To ascertain the significance of the link between the independent variables, the Pearson product moment correlation was performed (policies and language of communication) with intention to use achievement of extension services as dependent variable. There were 30 items in policies, 16 items in language of communication, while there were 16 items in intention to use achievement of extension services. The five-point Likert scale was used in all these items.

The result of bivariate correlation matrix reveals in Table 2 that there is statistically significant relationship between policies and achievement of extension services among crop farmers at the 0.01 level, $r(0.518)$, $p=0.0001$, which indicates that respondents had high perception towards policies about achievement of extension services and positively relates with achievement of extension services among crop farmers in North-eastern Nigeria. The results are in accordance with Musa et al. (2019). This indicates that the use of policies to improve agricultural extension activities by the respondents on their cropping activities has a higher effect on the livelihood of the beneficiaries of the crop farmers in the study area. This is in conformity to the a priori expectation that the policies implementation of agricultural extension services to crop farmers increase respondents' likelihood of having a good livelihood. The previous researchers hold an opinion that generally, a theory should not only guide to consider different variables for analysis but also determination of relationships among them for situation specific strategies (Galt, 2008). Additionally, some authors have also highlighted the importance and stated that effective research in agricultural systems require complete understanding of farmers behaviors as farming community is the major player in agricultural systems (Edwards-Jones, 2006). Policies are a deliberate course of action to direct decisions and achieve reasonable results, according to Musa et al. (2019). That is why people follow by trying to mentally prepared and inclined towards training and development in extension services. From another angle, some researchers have criticized the theory and pointed out that from the three determinants of the model (policies and language of communication), nothing shows an important contribution to the forecasting of achievement. As these are population and achievement dependent, each determinant would differ from individual-to-individual basis so important contribution of each construct is missing.

The statistical findings also show a significant and effective relationship between language of communication (strong) and achievement of extension services among crop farmers at 0.01 level with $r = 0.739$, $p=0.0001$. The results are in line with Ambali (2015). The similarity of the results could be since people are having more awareness towards extension services among crop farmers. This may also be linked to the fact that historically many innovations, particularly in agricultural projects, were developed at public or private research institutions and disseminated to farmers through traditional top-down agricultural advisory services.

Table 2: Result of the Relationship between IVs (Policies, Language of Communication) and DV (Achievement of Extension Services)

Variables	Correlation Coefficient (r)	Sig-r
Policies	.518**	.000
Language of Communication	.739**	.000

** = highly significant at 0.001 level of probability

According to Ogunniyi et al. (2020), it is assumed that there should not be perfect collinearity. Multicollinearity occurs when there is a high correlation between IVs. As this creates issue in examining R^2 size and contribution of individual IVs. The two methods commonly applied to assess multicollinearity are

tolerance test and VIF (Kleinbaum *et al.*, 1988). So, the result in (Table 3) about multicollinearity reveals that there is no problem of multicollinearity between the chosen independent variables. Tolerance level is not ≤ 1 in any individual variable (IV) and VIF is also less than 10. Thus, there was no problem of multicollinearity. This has been suggested and supported by Khanal *et al.* (2018) who conducted study in Nigeria with 351 respondents. Based on Guilford rule, there is high relationship ($r= 0.755$) between number of IVs (policies, language of communication) and achievement of extension services among crop farmers in North-eastern Nigeria. Moreover, about 57% (Adj. R^2) variance in achievement of extension services is explained by IVs. In other words, 43% of the variation in achievement of extension services was not explained by IVs.

Table 3: Showed the Result of Multicollinearity

Variables	Tolerance	Variance Inflation Factor (VIF)
Policies	.372	2.691
Language of Communication	.694	1.442

The results in (Table 3) reveal that positive Beta coefficient of all predictors (policies, language of communication) had positive influence on the achievement of extension services. These results are consistent with the findings of Alavion *et al.* (2017), that language of communication which is related with interaction and is statistically significant along with showing positive sign. It further depicts that language of communication had highest influence ($\beta = 0.528$) on the achievement of extension services among crop farmers. The second predictor of immediate achievement is policy. Based on the statistical results, it is statistically significant along with holding positive sign. Although this predictor has shown significant influence but comparatively less ($\beta = 0.201$) influence on achievement of extension services among crop farmers. Indeed, after highest beta value of language of communication, policies is the second highest ($\beta = 0.201$) influencer on achievement of extension services among crop farmers. The result of change in R^2 reveals that among the three independent variables, influence of language of communication showed significantly higher amount of variance which was followed by policies. Thus, when the two predictors taken together, accounted for significant amount of unique variance as in total R^2 57% (0.570) as shown in the Table 4. The statistical findings of the multiple regression support the Theory of Classical Communication Model by Nitsch 1999 in terms of explaining the achievement of extension services among crop farmers. Additionally, achievement of extension services is highly influenced by language of communication, which is followed by policies. Furthermore, as the result of applying Achievement Motivation Theory (AMT), the regression results show that achievement of extension services is influenced by language of communication, perceived policies of extension services.

Table 4: Multiple Linear Regression Results

Model	R	R Square	Adjusted R Square	B	Betat	Sig.
Predictors	.755	.570	.566	1.073	7.305	.000
Policies				.201	.212	3.689
Language of Communication				.528	.651	15.499
Durbin Watson	1.463					
F Value	155.469					

* Significant at 0.05 level

a. Dependent Variable: Achievement of Extension Services

Based on the relationship between factors, extension policies and language of communication have a positive strong effect on the achievement of extension services (Table 5). The crop farmers understand the message the extension workers passed with good language of communication. Thus, this model (Figure 1) fits the data to explain the achievement of extension services among crop farmers in the context of North-eastern Nigeria and the regression equation is given as under achievement of extension services = 0.201 (policies) + 0.528 (language of communication).

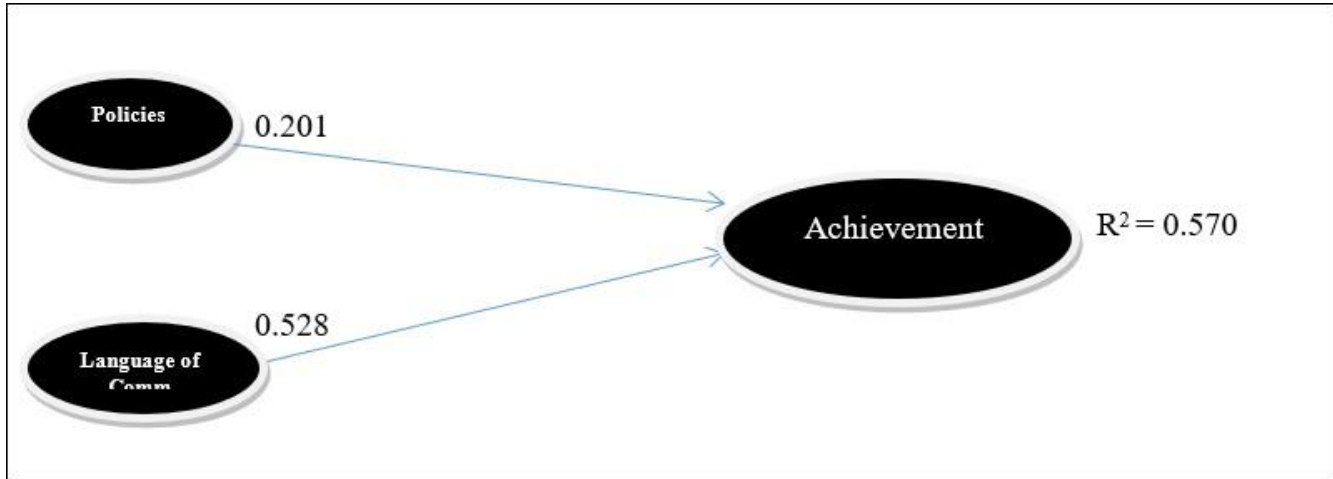


Figure 1: Study’s Fit Model

Table 5: Summary of Hypotheses and their Results

No.	Research Hypothesis	Significant Level	Result
1.	There is significance relationship between policies and achievement of extension services	0.000**	Fail to reject H0
2.	There is significance relationship between language of communication and achievement of extension services	0.000**	Fail to reject H0
3.	There is significance influence of policies on achievement of extension services	0.000**	Fail to reject H0
4.	There is significance influence of language of communication on achievement of extension services	0.000**	Fail to reject H0

CONCLUSION

In this respect, the current study concludes that crop farmers’ practice should be given more attention by the relevant agencies as the crop farmers are economically, socially, and psychologically encouraged at different levels. The relationship between the factors (policies and language of communication) indicated a significant impact on the achievement of extension services among crop farmers in North-Eastern Nigeria. Attention should be given to proper policies and good language of communication for improvement of extension services among crop farmers. Language of communication plays a veritable role in empowering crop farmers. From the findings all the respondents’ in the Northeast Nigeria fluently speaks Hausa Language which serves a bonding language among the crop farmers in the study area and provides variety of language of spoken. This gives extension workers easy ways to disseminate new ideas and innovation in the study area. As overall conclusion, from perspective of crop farmers, extension workers have achieved a medium/average level of achievement in extension services while policies and language of communication has positive effect on the achievement of extension services.

REFERENCES

1. Aldosari, F., Al Shunaifi, M. S., Ullah, M. A., Muddassir, M., and Noor, M. A. (2017). Farmers' perceptions regarding the use of Information and Communication Technology (ICT) in Khyber Pakhtunkhwa, Northern Pakistan. *Journal of the Saudi Society of Agricultural Sciences*.
2. Alavion, S. J., Allahyari, M. S., Al-Rimawi, A. S., and Surujlal, J. (2017). Adoption of Agricultural E-Marketing: Application of the Theory of Planned Behavior. *Journal of International Food and Agribusiness Marketing*, 29(1), 1-15.
3. Anaeto C.F (2017): Concept of Rural Development in Nigeria: problems and solutions. *The Nigerian Academic Forum*: 6(4)
4. Ballantyne P. (2002) Collecting and propagating local development content, Research Report no. 7, IICD, Den Haag
5. Diehl, D.C., and Galindo-Gonzalez, S. (2014). Planning or refining an extension program. Gainesville, Florida, USA: University of Florida.
6. Gambo (2017) research report sponsored by Federal Ministry of Agriculture Abuja Nigeria, presented in 2018.
7. Kahan, D. (2013). *Managing Risk in Farming*. FAO
8. Khanal, U., Wilson, C., Hoang, V. N., & Lee, B. (2018). Farmers' adaptation to climate change, its determinants and impacts on rice yield in Nepal. *Ecological Economics*, 144, 139-147.
9. Kirikkanat B. (2014). Achievement Motivation: Its Structure and Relation With Learning Environments. *Journal Of Psychological Counseling and Education-Jpce*.Vol:1 No:1, 77-90
10. Kleinbaum, D.G., Kupper, L.L. and Muller, K.E. (1988). *Applied regression analysis and other multivariate methods*, PWS, Boston, MA
11. Kone H. (2002) *Methodological guide for designing and implementing a multimedia communication strategy*, FAO, Roma.
12. Kuehne, G., Llewellyn, R., Pannell, D. J., Wilkinson, R., Dolling, P., Ouzman, J., & Ewing, M. (2017). Predicting farmer uptake of new agricultural practices: A tool for research, extension, and policy. *Agricultural Systems*, 156, 115-125.
13. Liu, Y., Engel, B. A., Flanagan, D. C., Gitau, M. W., McMillan, S. K., & Chaubey, I. (2017). A review on effectiveness of best management practices in improving hydrology and water quality: Needs and opportunities. *Science of the Total Environment*, 601, 580-593.
14. Morwani, D. N., Ombati, J. M., and Ngesa, F. U. (2017). Relationship between level of education of farmers and use of information and communication technologies in marketing of farm produce by small scale farmers in Manga Sub-County, Kenya. *International Journal of Scientific and Technology Research*, 6(2), 257-264
15. Msuya, C. P., Annor-Frempong, F. K., Magheni, M. N., Agunga, R., Igodan, C., Ladele, A. A. & Ndiaye, A. (2017). The role of agricultural extension in Africa's development, the importance of extension workers and the need for change. *International Journal of Agricultural Extension*, 5(1), 51-58.
16. Musa, M., Ismail, M. M., & Ismail, W. I. (2019). Effectiveness Of Extension Agent Services In Influencing The Adoption Of Modern Hive In Sustainable Stingless Beekeeping. *American Journal of Agriculture & Biological Sciences*, 7 (2): 194-200.
17. Ogunniyi, A., Babu, S. C., Balana, B., & Andam, K. S. (2020). National extension policy and state-level implementation: The case of Cross River State, Nigeria (Vol. 1951). *Intl Food Policy Res Inst*.
18. Otishua, F. B., Anang, B. T., & Mintah, S. (2018), *Producer Perceptions and Willingness To Pay for Agricultural Extension Services in Ada East District Of Ghana*.
19. Pan, Y., Smith, S. C., & Sulaiman, M. (2018). Agricultural extension and technology adoption for food security: Evidence from Uganda. *American Journal of Agricultural Economics*, 100(4), 1012-1031.
20. Rahman, A. A., & Yousif, O. (2016). Role of private agricultural extension sector in Gezira State,

Sudan. American Academic Scientific Research Journal for Engineering, Technology, and Sciences, 25(1), 281-288.